CLAIMS:

1.   (Previously presented)   A detection device for detecting intravascular pressure, said device comprising: analyzing means for automatically analyzing extracorporeal blood pressure to derive the intravascular blood pressure in proximity of a suspected location of a blood flow restriction and comparing the derived intravascular blood pressure to a standard, and detecting means for detecting and comparing variations in the extracorporeal blood pressure during multiple tests to indicate a blood flow restriction.

2.   (Previously presented)   The device according to claim 1, wherein said analyzing means includes a microprocessor.

3 – 5. (Canceled)

6.   (Previously presented)   The device according to claim 1, wherein said detecting means is further defined as detecting and comparing variations in the derived intravascular blood pressure during multiple tests to indicate a blood flow restriction, said blood flow restriction indicating a risk selected from the group consisting of potential access failure, stroke, heart attack, and stenosis.

7 – 9. (Canceled)

10.   (Currently amended)   A method of detecting potentially compromised or restricted blood flow by:

calculating the derived intravascular intervascular blood pressure in proximity of a suspected location of the compromised or restricted blood flow;

comparing the derived intravascular blood pressure to a standard; and

detecting restricted blood flow when elevation of the derived intravascular blood pressure over a series of calculations is indicated.

11.   (Previously presented)   The method of claim 10, wherein said calculating step further includes automatically calculating the derived intravascular blood pressure.

12.   (Previously presented)   The method of claim 10, wherein said comparing step further includes automatically comparing the derived intravascular blood pressure to a standard.

13.   (Previously presented)   The method of claim 12, wherein said automatically comparing step further includes automatically comparing the derived intravascular blood pressure to a standard using an algorithm.

14.   (Previously presented)   The method of claim 10, wherein said calculating step further includes automatically calculating the intravascular blood pressure during a procedure.

15.   (Previously presented)   A system for providing warning of potential health problems due to irregular intravascular pressure caused by blockage of the blood vessels in proximity of an extracorporeal blood access, said system comprising: a detection device according to claim 1; and communication means operably connected to said device for communicating a warning when said device indicates an irregularity of the intravascular blood pressure of at least two uses of said device.

16.   (Original)   The system according to claims 15, wherein said communication means is selected from the group consisting essentially of electronic communications, facsimile, telephone, cable modem, and T1 connection.

17 – 25.   (Canceled)